

CLAIMS

1. A device comprising first (10, 24, 28, 35) and second (11, 25, 27, 33) layers wherein:
 - 5 the first layer is flexible; and
 - the second layer has a corrugated structure and is in contact with the first layer along a substantial portion of the length of the second layer so as to prevent fracture of the second layer when the first layer is deformed.
- 10 2. A device according to claim 1, wherein the first layer (10, 24) is a substrate.
3. A device according to claim 1, further comprising a third layer (26, 34) in contact with the first layer (28, 35), wherein the third layer (26, 34) comprises a
15 substrate and the first layer (28, 35) comprises one or more coatings on the substrate.
4. A device according to claim 3, wherein the third layer (26, 34) comprises a corrugated topography.
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5. A device according to claim 3 or 4, wherein the first layer (28, 35) comprises an acrylate lacquer.
6. A device according to any one of the preceding claims, wherein the
25 second layer (11, 25, 27, 33) is a coating on the first layer (10, 24, 28, 35).
7. A device according to any one of the preceding claims, wherein the first layer (10, 24, 28, 35) comprises a corrugated topography.
- 30 8. A device according to any one of the preceding claims, wherein the second layer (11, 25, 27, 33) comprises a series of adjoining troughs and

ridges, each trough and each ridge including substantially flat portions (16, 17, 29, 30)

9. A device according to claim 8, wherein the widths (19, 20, 31, 32) of the substantially flat portions (16, 17, 29, 30) are selected to prevent fracture when the first layer (10, 24, 28, 35) is deformed to a predetermined radius of curvature.
10. A device according to claim 9, wherein the widths (19, 20, 31, 32) are selected to be less than a predetermined length, the predetermined length being dependent on the average length between cracks (23) for a continuous layer deformed to the predetermined radius of curvature.
11. A device according to any one of claims 8 to 10, wherein the transitions (18) between the troughs and ridges are curved.
12. A device according to any one of claims 8 to 11, wherein the substantially flat portions (16, 17, 29, 30) are interconnected to provide a continuous path for an electric current.
13. A device according to any one of the preceding claims, wherein the corrugated structure comprises an undulating topography.
14. A device according to any one of claims 2 to 13, wherein the substrate comprises polyvinyl chloride.
15. A device according to any one of the preceding claims, wherein the second layer (11, 25, 27, 33) comprises a transparent conductor.
16. A device according to claim 15, wherein the second layer (11, 25, 27, 33) comprises a conductive oxide.

17. A device according to any one of the preceding claims, comprising a display.
18. A method of fabricating a device comprising first (10, 24, 28, 35) and
5 second (11, 25, 27, 33) layers wherein the first layer is flexible and the second layer has a corrugated structure and is in contact with the first layer along a substantial portion of the length of the second layer so as to prevent fracture of the second layer when the first layer is deformed, the second layer comprising a plurality of interconnected portions (16, 17, 29, 30) each having a portion
10 length (19, 20, 31, 32), the method including selecting the portion length to prevent fracture when the first layer is deformed to a predetermined radius of curvature.
19. A method according to claim 18, further comprising determining a
15 spacing between cracks (23) for a continuous layer of material when deformed to a predetermined radius of curvature, and selecting the portion length to be a value that is dependent on the determined spacing.
20. A method according to claim 19, comprising determining an average
20 spacing between the cracks (23).